

Abstract

Holographic printers for producing simultaneous and near real time white light viewable holographic imagery are disclosed. Such printers include fiber optics for dividing the reference beam into a plurality of identical reference beams each intersecting the object beam path at the recording medium. In one embodiment, the recording medium is simultaneously exposed to both the object beam and the plurality of reference beams. An alternate embodiment is provided for sequentially opening each of the reference beam shutters with the opening of the object beam shutter.

Preferably, the printer includes a liquid crystal panel and a computer for supplying images in the liquid crystal panel between each sequential opening of the shutters. For the formation of integral holograms, fiber optics are provided for dividing the object beam. The printers disclosed herein avoid the mechanical repositioning (of the film plane, or either one of the recording beams), stop, wait, expose and repeat process of prior art composite and integral holographic printers.